Applicant : Steven T. Rosenberg
Serial No. : 10/619,068
Filed : July 11, 2003
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Attorney's Docket No.: 100202494-1
Amendment dated Aug. 14, 2007
Reply to Office action dated Feb. 21, 2007

Amendments to the Claims

The following Listing of Claims replaces all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1-12 (canceled)

Claim 13 (original): A device for controlling a video game, comprising:

a movable input;

an imager attached to the input and operable to capture images of a scene in the vicinity of the input; and

a movement detector operable to compute three-dimensional position coordinates for the input based at least in part on one or more comparisons between images of the scene captured by the imager and to generate output signals for controlling the video game based on the computed position coordinates.

Claim 14 (original): The device of claim 13, wherein the movement detector is operable to compute rotational position of the movable input based at least in part on one or more comparisons between images of the scene captured by the imager.

Claim 15 (original): The device of claim 13, wherein the input is a device for simulating a sports game.

Claim 16 (original): The device of claim 15, wherein the input is formed in the shape of a glove.

Claim 17 (original): The device of claim 13, further comprising an acceleration sensor unit attached to the input and operable to generate signals indicative of movement of the input in three-dimensions, wherein the movement detector is operable to detect movement of the input based at least in part on the signals generated by the acceleration sensor.

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Claim 18 (original): The device of claim 17, wherein the movement detector is operable to compute coarse three-dimensional position coordinates for the input based on the signals received from the acceleration sensor unit and to compute refined three-dimensional position coordinates for the input based on the computed coarse three-dimensional position coordinates and comparisons between images of the scene captured by the imager.

Claim 19 (original): The device of claim 17, wherein the movement detector is operable to periodically correct three-dimensional position coordinates for the input computed from signals generated by the acceleration sensor based on position coordinates computed from comparisons between images of the scene captured by the imager.

Claim 20 (original): The device of claim 17, wherein the movement detector is operable to compute acceleration information relative to position information computed from comparisons between images of the scene captured by the imager.

Claim 21 (original): The device of claim 17, wherein the movement detector is operable to compute a measure of movement rate of the movable input based on the signals received from the acceleration sensor unit, and the imager captures images of the scene at a variable rate that is set based on the computed movement rate measure.

Claim 22 (original): The device of claim 13, wherein the movement detector is operable to detect movement of the input by tracking features of the scene across multiple images.

Claim 23 (original): The device of claim 13, wherein the movement detector is operable to compute position coordinates for the reference surface by correlating features of the reference surface across multiple images.

Claim 24 (original): The device of claim 13, wherein the movement detector is operable to map the computed position coordinates to the output signals for controlling the video game.